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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/739,989	12/18/2000	Jaan Noolandi	D/A0489Q	4290

7590 10/13/2004

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EXAMINER	
DAWSON, GLENN K	

ART UNIT	PAPER NUMBER
3731	

DATE MAILED: 10/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/739,989	NOOLANDI ET AL.	
	Examiner	Art Unit	
	Glenn K Dawson	3731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 July 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *10* is/are allowed.

6)☒ Claim(s) *1-9 and 11-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-9,11-15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hauser-'828 in view of Zesch, et al.-6200491.

Hauser discloses the use of parabolic reflecting surface (lens) to focus Rf vibrational energy onto medication to cause it to atomize into droplets less than 6 micrometers in diameter. However, the placement from the body and the number and type of lenses used is not disclosed. It would have been obvious to have placed the device within 4 in. of the mouth or nose of the user, as it is common for vaporized medications to be inhaled through the nose or mouth, and to place it the claimed distance therefrom would be obvious to prevent loss of medication.

Zesch discloses the use of an array of lenses vibrated by a single transducer. To have provided Hauser with a plurality of lenses for each medication would have been obvious in order to provide for more even distribution of particles in the desired size range.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over hauser-'828 in view of Zesch-'491, and further in view of Lloyd, et al.-5497763.

Hauser as modified by Zesch makes obvious the invention as claimed with the exception of the flow sensor to synchronize the vibration of the transducer with inhalation. Lloyd discloses in col. 21 line 50 –col. 22 line 12 that it was known to use a flow sensor to synchronize the administration of inhaled medication with inhalation. It would have been obvious to have provided Hauser with a flow sensor in order to

synchronize the delivery of the droplets with the inhalation so that the medication is delivered during the time it is most beneficial.

Allowable Subject Matter

Claim10 is allowed.

Response to Arguments

Applicant's arguments filed 07-19-2004 have been fully considered but they are not persuasive.

The examiner contends that one skilled in the art would recognize the similarity of the fields of producing a mist of ink and a mist of pharmaceutical product using vibrated lenses. The difference between Hauser and the claims is the distance from the orifice and the number of lenses. One skilled in the art would recognize that placing the device at a distance farther from the orifice than 4 in. would risk the loss of product. Providing more than one lens to focus the waves is obvious in view of Zesch who discloses that it was known in a relevant technology to provide a plurality of lenses driven by a transducer. Therefore it would have been obvious to have used a device disclosed by Hauser and modified by the teachings of Zesch in order to perform the method of Hauser, as it would allow for the more even distribution of mist particles.

Zesch discloses the simultaneous deliverance of energy to the transducers.

Since the drivers must be located very close to the lenses, and since the lenses would have a small focal length, and because in the normal use of inhalers the delivery nozzle is placed in the mouth or nose, it would have been obvious that the part of the device housing the drivers would be placed inside the orifice as well.

Activating the transducers for 5 sec. Or less would be obvious in order to eliminate the undesirable wasting of product during a time at which the user is not inhaling.

Dependent claim 9 does not recite a limitation of a frequency range higher than 300 MHz. Claim 10 does, and this claim was not rejected.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenn K Dawson whose telephone number is 703-308-4304. The examiner can normally be reached on M-Th 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan T. Nguyen can be reached on 703-308-2154. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Glenn K Dawson
Primary Examiner
Art Unit 3731

Gkd
12 October 2004